

REMARKS

Claims 1-30 were previously pending in the application. New claim 31 is added. Therefore, claims 1-31 are presented for consideration. Claims 1-12 are withdrawn from consideration as being directed to a non-elected invention.

Claim 13 is rejected as anticipated by GRENDOL 4,541,534. This rejection is respectfully traversed.

Initially, applicants point out that the method of claim 13 is directed to a method of hot-forming a thermal plastic lens. GRENDOL discloses an injection molding method. One of ordinary skill in the art would recognize that a hot-forming method and an injection molding method are incompatible.

Claim 13 includes the step of placing a parison or preform of thermoplastic material between two dies. As known to one of ordinary skill in the art and as disclosed on page 1, lines 14-17 of the present application, a "parison" is a mass of thermoplastic material of standard shape. American Heritage Dictionary of the English Language, 4th Edition, defines a "preform" as an object that has been subjected to preliminary, usually incomplete shaping or molding before undergoing complete or final processing.

Thus, one of ordinary skill in the art would understand that a step of placing a parison or preform of thermoplastic material between the two dies would necessarily exclude injecting

molten plastic into a cavity through a nozzle as shown in Figure 4 and described at column 5, lines 16-28 of GRENDOL. Such molten plastic of GRENDOL is neither a mass of material of standard shape nor an object that has undergone initial molding as required to meet the limitation of a parison or preform.

Further, claim 13 provides placing a parison or preform of the thermoplastic material between the two dies and enclosing the assembly in the sheath. Thus, the preform is placed between the two dies and then the sheath is enclosed around the preform as shown going from Figure 1 to Figure 2 of the present application, for example.

In contrast, as disclosed at column 5, lines 23-28 of GRENDOL, outer blocks 41 and 42 (and thus sheath 54,55) are held secured against one another prior to injection of the molten plastic into cavity 86. As required in an injection molding method such as the method of GRENDOL, since molten material is being injected into the mold, the mold must first be closed before molten material is injected therein.

Claim 13 also provides that the two dies and the sheath are provided with intrinsic and both-way heat transfer means.

The Official Action has indicated elements 54 and 55 of GRENDOL as a sheath within which dies 59 and 60 slide. However, neither sheath 54 nor sheath 55 contain an intrinsic heat transfer means. The heating rods 46 of GRENDOL are disposed in

blocks 41 and 42, not within sheath 54 and 55. In addition, only die 60 has a heating rod 46 therein. GRENDOL does not disclose that the two dies are provided with intrinsic and both-way heat transfer means as recited.

Since GRENDOL neither teaches two dies and the sheath being provided with intrinsic and both-way heat transfer means nor placing a parison or preform of thermoplastic material between the two dies and enclosing the assembly in the sheath, GRENDOL does not anticipate claim 13.

Claims 20-22 are rejected as unpatentable over GRENDOL. This rejection is respectfully traversed.

Claims 20-22 depend from claim 13 and further define the invention. As set forth above, GRENDOL does not anticipate claim 13. Therefore, the limitations of claims 20-22 would not be obvious in view of GRENDOL.

Claims 14-19 are rejected as unpatentable over GRENDOL in view of MAUS et al. 5,376,317. This rejection is respectfully traversed.

Applicants note that MAUS et al. is also directed to an injection molding method. As set forth above with respect to GRENDOL, in an injection molding method, a thermoplastic material is injected through an injection sprue into an already closed cavity at a high enough temperature for thermoplastic material to be molten.

In contrast, in a hot-forming method, the thermoplastic material is introduced in the mold as a parison or solid-state preform and then the thermoplastic material is heated within the mold.

As also set forth above, these methods are not interchangeable. The hot-forming mold using the hot-forming method could not be used as an injection mold since it does not have an injection sprue. In addition, an injection mold cannot be used as a hot-forming mold because even if a solid state preform could be introduced within the mold, the heat transfer device of an injection mold is not sufficient to heat a preform.

Therefore, the proposed combination of the two injection molding methods of GRENDOL and MAUS et al. would not render obvious the hot-forming method as recited in claims 14-19.

Claims 25-29 are rejected as unpatentable over GRENDOL in view of GRESHES 6,180,033. This rejection is respectfully traversed.

GRESHES is only cited for the teaching of applying surface films to a multiple thermoplastic material during molding. GRESHES does not teach or suggest what is recited in claim 13. As set forth above, GRENDOL does not disclose or suggest what is recited in claim 13. Since claims 25-29 depend from claim 13 and further define the invention, the proposed combination of references would not render obvious claims 25-29.

Claims 24 and 30 are rejected as unpatentable over GRENDOL in view of LEFEBVRE 5,458,820. This rejection is respectfully traversed.

LEFEBVRE is only cited for the teaching of forming functional layers or a functional coating layer. LEFEBVRE does not teach or suggest what is recited in claim 13. As set forth above, GRENDOL does not disclose or suggest what is recited in claim 13. Since claims 24 and 30 depend from claim 13 and further define the invention, the proposed combination of references would not render obvious claims 24 and 30.

Claim 23 is rejected as unpatentable over GRENDOL in view of SCHAFFNER 4,647,261. This rejection is respectfully traversed.

SCHAFFNER is only cited for the teaching of slidably cutting any flash from the molded lens after molding is completed. SCHAFFNER does not teach or suggest what is recited in claim 13. As set forth above, GRENDOL does not disclose or suggest what is recited in claim 13. Since claim 23 depends from claim 13 and further defines the invention, the proposed combination of references would not render obvious claim 23.

In addition, in each of the references to GRESHES, LEFEBVRE and SCHAFFNER, the hot-forming mold is heated by external means, that is, it is heated in an oven. None of these

references teaches or suggests two dies and a sheath provided with intrinsic and both way heat transfer means.

By way of further explanation, providing a mold used in the method of hot-forming a thermoplastic lens as recited in claim 13 with two dies and a sheath, enables the sheath to perform a thermal containment function. Specifically as disclosed at page 3, line 33, to page 4, line 5 of the present application, it is advantageous to have the both-way heat transfer means intrinsic in the sheath and dies because the dies are mechanically guided in the thermal containment sheath, and unlike the cited references, this arrangement provides a quality and uniform heating/cooling of the mold and of the thermoplastic material without requiring moving the mold in order to subject the mold to the action of external heating and/or cooling.

New claim 31 is similar to claim 13, but includes additional features as to the sequence of steps performed in a hot-forming method. As noted above, the injection molding method of GRENDOL could not be modified to anticipate or render obvious a hot-forming method, and thus new claim 31 is believed to avoid the rejection under §102 and is believed patentable over the art of record.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been

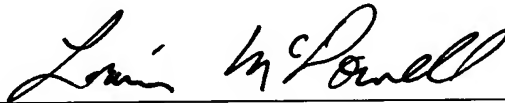
placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Please charge the fee of \$18 for the one extra claim of any type added herewith, to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. \$1.16 or under 37 C.F.R. \$1.17.

Respectfully submitted,

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